

Longwave Imaging for Astronomical Applications, Phase II

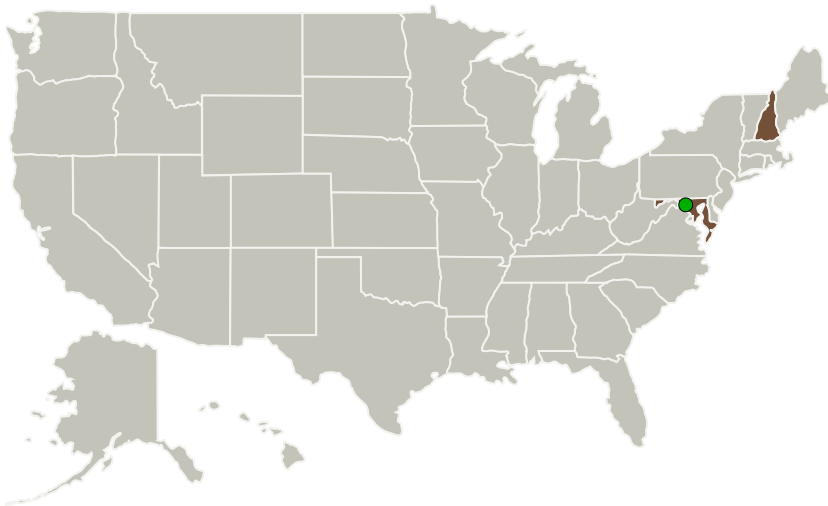
Completed Technology Project (2010 - 2012)




Project Introduction

We propose to develop a compact portable longwave camera for astronomical applications. In Phase 1, we successfully developed the eye of the camera, i.e. the focal plane array (FPA) and produced good imagery with it. In Phase 2, we will optimize the FPA for quantum efficiency and pixel operability, integrate it into a dewar cooler assembly, and package the resulting sensor engine with electronics and optics into a camera system. We will deliver the camera to NASA for field testing. We expect the camera to be particularly useful in the search for cold objects in the universe and in the measurement of atmospheric gases with absorption lines in the spectral response band of the camera.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
QmagiQ, LLC	Lead Organization	Industry	Nashua, New Hampshire
 Goddard Space Flight Center(GSFC)	Supporting Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations

Maryland	New Hampshire
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Project Transitions

 **January 2010:** Project Start

 **March 2012:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/139169>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

QmagiQ, LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

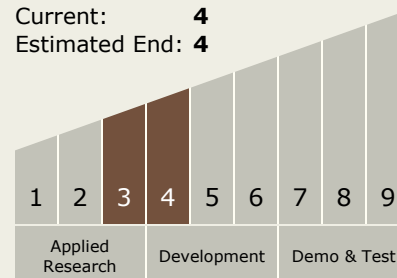
Mani Sundaram

Technology Maturity (TRL)

Start: 3

Current: 4

Estimated End: 4



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Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.1 Detectors and Focal Planes

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System